

Historic, Archive Document

Do not assume content reflects current
scientific knowledge, policies, or practices.

25

REIGN AGRICULTURE

Million Dollars

250

U. S. POULTRY, EGGS AND EGG PRODUCTS EXPORTS 1972-1976

200

150

100

50

0

1972

1973

1974

1975

1976

March 21, 1977

U.S. poultry's success story

- U.S. Poultry Exports Gain
- Soviets Up Grain Storage

TRI-AGENCY READING ROOM

500 12th St., SW, Room 505
Washington, D. C. 20250

Foreign
Agricultural
Service
U. S. DEPARTMENT
OF AGRICULTURE

In this issue:

- 2 **U.S. Poultry, Egg Exports Show Big Gain in 1976**
By David R. Strobel
- 5 **Brazil's Soybean Expansion Seen Shifting to New Areas**
- 6 **Drought Cuts French Agricultural Surplus**
- 8 **Soviets Plan Expansion of Grain Storage Capacity**
By Kelth Severin
- 11 **Ivory Coast Trying To Match Palm Oil Success With Copra**
By Willie F. Brooks, Jr.

This week's cover:

Chart shows the phenomenal rise of U.S. exports of poultry, eggs, and egg products from only \$86 million in 1972 to \$251 million last year. See article opposite for a detailed report on the success of the U.S. poultry industry in foreign markets.

Bob Bergland,
Secretary of Agriculture

David L. Hume, Administrator, Foreign Agricultural Service

Editorial Staff:

Kay Owsley Patterson, Editor
Beverly J. Horsley, Assoc. Editor
G. H. Baker, Marcellus P. Murphy,
Aubrey C. Robinson, Isabel A. Smith, Lynn A. Krawczyk.

Advisory Board:

Richard A. Smith, Chairman;
Gordon O. Fraser, William Horbaly, James L. Hutchinson, Richard M. Kennedy, J. Don Looper, Larry B. Marton, Brice K. Meeker, Jimmy D. Minyard, Steve Washenko.

The Secretary of Agriculture has determined that publication of this periodical is necessary in the transaction of public business required by law of this Department. Use of funds for printing *Foreign Agriculture* has been approved by the Director, Office of Management and Budget through June 30, 1979. Yearly subscription rate: \$34.35 domestic, \$42.95 foreign; single copies 70 cents. Order from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Contents of this magazine may be reprinted freely. Use of commercial and trade names does not imply approval or constitute endorsement by USDA or Foreign Agricultural Service.

U.S. Poultry, Egg Exports Show Big Gain in 1976

By DAVID R. STROBEL

Foreign Market Development, Dairy and Poultry Foreign Agricultural Service

EXPORTS of U.S. poultry and eggs in 1976 skyrocketed to a record level of \$251 million, up 63 percent over those of 1975. Since 1972—when exports amounted to only \$86 million—new records have been set each year. And, with the outlook for red meats and an increasing demand for protein throughout the world, prospects are bright for 1977.

These record 1976 exports included over \$126 million of chicken meat, more than 50 percent of it being chicken parts; about \$40 million of turkey meat; \$10 million of fowl; \$8 million of shell eggs for table use; \$7.5 million of egg products; and \$55 million of shell eggs for hatching, breeding stock, and other live poultry.

U.S. poultry and egg products entered 111 markets around the world in 1976—another new record.

The 1976 export figures indicate there are export markets for all segments of the U.S. poultry and egg industries, and for all products produced. In fact, export markets are better for some products—such as chicken feet, chicken skin, livers, gizzards, and turkey tails—than the domestic market.

All but one product export category registered increases in 1976. That exception was egg products, principally frozen products, which decreased significantly. This occurred because U.S. exports to Japan of products under this category were only one-tenth the

quantity of 1975. Japanese domestic egg production rose over 4 percent in 1976, and both the Japanese Government and the egg producer organizations exhorted importers and processors of this product to reduce imports. U.S. frozen yolks bore the brunt of these efforts.

Given the Japanese action, continued limited access to the European Community's market, and the existence of other barriers, the U.S. industry's performance in the export market has been phenomenal.

The export record testifies to the U.S. industry's efficiency, and its effort to make exports part of its total marketing. In addition, it is a tribute to the success of the joint U.S. industry/Government overseas market development program.

The seven 1976 leading export markets on a value basis for U.S. poultry and egg products, in order of importance, were Canada, Japan, Iraq, Hong Kong, West Germany, Jamaica, and Singapore.

Canada now has a quota system, which applies to the import of eggs, egg products, and turkey meat. Marketing conditions in 1976, however, necessitated increases of initial quotas. Canada is still giving consideration to quotas on the import of broiler meat. The Canadian situation and the highly protective gate price, variable-supplemental levy system of the EC could



adversely affect 1977 U.S. exports to these markets.

Exports of chicken meat, mainly whole broilers and broiler parts, were up 123 percent in 1976 and continued to be the most important export item—accounting for about 50 percent of the total export value.

In the chicken meat category, there are many 1976 market highlights. The 35,000-ton sale of whole broilers to Iraq was the first large-scale sale to the increasingly important Middle East/Persian Gulf market. The sale of U.S. broilers to the USSR in mid-1976 was a first, and it was followed up later in the year with an additional sale. With the halting of EC-subsidized exports to Japan, Hong Kong, and Singapore, these Far East markets became the fourth, fifth, and sixth largest markets, respectively, for U.S. whole broilers—with an aggregate export value of \$2.5 million, while remaining the top three markets for U.S. poultry parts.

In addition to regaining the Far East market from subsidized EC competition, U.S. whole broiler exports can now apparently give strong competition, U.S. whole broiler exports with products from the People's Republic of China (PRC). The U.S. Agricultural Officer in Hong Kong recently reported that the PRC, normally by far the largest supplier of fresh, chilled, or frozen whole chicken to Hong Kong, supplied only 582 tons in October 1976. The United States supplied 593 tons or 42 percent of the market. In contrast, the United States supplied only 81 tons, 6.3 percent of the total import in October 1975.

Chicken parts, principally broiler parts, continued to be the top export item in the chicken meat category, accounting for over 50 percent of the \$126 million total export value. Japan

was the leading market, taking \$20 million worth, and was closely followed by Hong Kong (\$14 million) and Singapore (\$6 million). The average value of chicken parts per pound to each of these markets was over 40 cents—with whole broiler legs continuing to be the foremost item to Japan, and wings, to Hong Kong and Singapore. These markets are also important for lower-priced items, such as chicken feet and skin.

Last year, fowl exports increased 148 percent to \$10 million, with Canada and Japan being by far the most important markets. A highlight for fowl exports was Nigeria, which as the No. 3 market, took \$428,000—up from \$10,000 in 1975. Imports by Singapore—a relatively new market—also rose. In addition, exports of canned poultry amounted to \$3 million, an increase of 71 percent above 1975's.

THE SECOND most important poultry meat export was turkey, accounting for 17 percent (about \$40 million) of the total 1976 value. The largest turkey market was West Germany, which took \$14 million worth. U.S. exports of poultry meat to the EC, as the result of the EC levy system, are now basically turkey meat with the primary export being uncooked turkey parts—drums and thighs. Demand for uncooked turkey parts on the West German market is the direct result of the Foreign Agriculture Service (FAS)/Poultry and Egg Institute of America (PEIA) cooperative overseas market development program.

The export volume of uncooked products to West Germany will continue to vary depending on the total EC import charges levied. A factor in the EC's establishment of the total import charge level is the maintenance of de-

sired internal prices balanced against demand for large-size parts. Unless there is an EC decision to deny market demand, it is anticipated that at certain periods uncooked products will continue to be permitted entry because of the inability of the EC to produce an adequate supply of large turkey parts.

The continuing growth of an EC market for U.S. cooked, processed products to serve the hotel, restaurant, and institutional trade is of market interest. Cooked product is bound under the General Agreement on Tariffs and Trade (GATT) at 17 percent ad valorem. Because of the EC's import system on uncooked product, an increasing percentage of U.S. turkey meat exported to this market is made up of cooked product. Market promotion by the PEIA for the EC has been continually changed to adjust to market conditions in order to maximize results. Market promotion emphasis is now given to new processed cooked products. Promotion activities are carried out under agreement with individual importers, who must have purchased U.S. products and must share market promotion costs.

Among the 1976 market highlights for turkey meat is the growth of the Swiss market to \$2.3 million, up 116 percent from 1975. This resulted directly from U.S. firms producing calibrated turkey schnitzel to Swiss specifications. Other turkey items are now being introduced and promoted.

Of particular interest is the fact that Hong Kong, Nigeria, and Japan are now \$1-million-plus markets for the U.S. turkey industry, while the Middle East/Persian Gulf is close to \$1 million. Nigeria and the Middle East/Persian Gulf are new expanding markets, having taken only \$101,000 and \$320,000, respectively, in products in 1975.



*From left to right:
A chef demonstrates
the carving of a
U.S. turkey during
a Foreign Agricultural
Service trade show
in Jidda, Saudi Arabia.
At the same show,
Saudis sample
U.S. poultry products.
Chicken hot dogs
are prepared
during an FAS show
at the U.S. Trade
Center, Tokyo.*

Turkey ham, turkey pastrami, turkey bologna, and turkey salami were introduced in several overseas markets in 1976. These products have a good export potential, which is enhanced because they overcome religious barriers prohibiting the use of certain red-meat products, and offer attractive alternatives to higher priced red-meat products in all markets. They well illustrate the broad potential and appeal of turkey meat.

LAST YEAR 13.3 million dozen shell eggs for table use, valued at \$8 million, moved into export, an increase of 42 percent over 1975's. Of this, \$3.2 million worth went to Canada, making this traditional market the leader. The market highlight, however, was the 4.5 million dozen eggs, valued at \$2.7 million, exported to Hong Kong, representing a 191 percent rise over 1975's shipments. U.S. table eggs to this market are a recent and amazing development since high quality, cartoned U.S. eggs were first introduced to Hong Kong in mid-1974.

In 1976, \$780,000 worth of U.S. table eggs moved to the Caribbean, and \$636,000 worth went to Mexico, the third and fourth leading market outlets, respectively.

An indication of the potential for expansion of shell egg exports is information—in a January 1977 report from the U.S. Agricultural Attaché in the Netherlands—on Dutch exports to the Middle East/Persian Gulf area. During January-November 1976, the Dutch exported 118 million eggs to Iran, and 27 million to the United Arab Emirates, increases of 142 percent and 258 percent, respectively, from the same 1975 period. Although statistical data is limited for the area, this bit of information, alone, shows that the Middle East/Persian Gulf market is one worthy of investigation by the U.S. shell egg industry. In all, U.S. shell eggs for consumption moved to 23 countries in 1976, but many were small-lot shipments as shown by the export values.

Of a total \$55 million export value of shell eggs for hatching, breeding stock, and other live poultry, \$22 million moved to Canada, \$8 million to the Caribbean, \$5 million to the EC, \$3 million to Japan, and \$2 million to Mexico. Although U.S. breeders established overseas operations several years ago, there is still call for U.S.

hatching eggs and breeding stock to replenish existing flocks and to establish new industries.

Rounding out the 1976 export market review, the \$7.5 million worth of egg-product export must be noted. The United Kingdom, with imports of \$1.5 million, was the biggest U.S. market; Japan, at \$1 million, was second. Other important markets were Canada, West Germany, Switzerland, Greece, and Hong Kong. Of special market interest is Hong Kong, which did not import U.S. egg products in 1975 but imported \$224,000 worth last year.

Exports of frozen egg products to Japan dropped from \$3.9 million in 1975 to \$323,000 in 1976. While imports from the United States dropped sharply, however, Japan's 1976 imports of egg products about equaled those of 1975. Much of these imports were subsidized by countries competing with the United States for this important market.

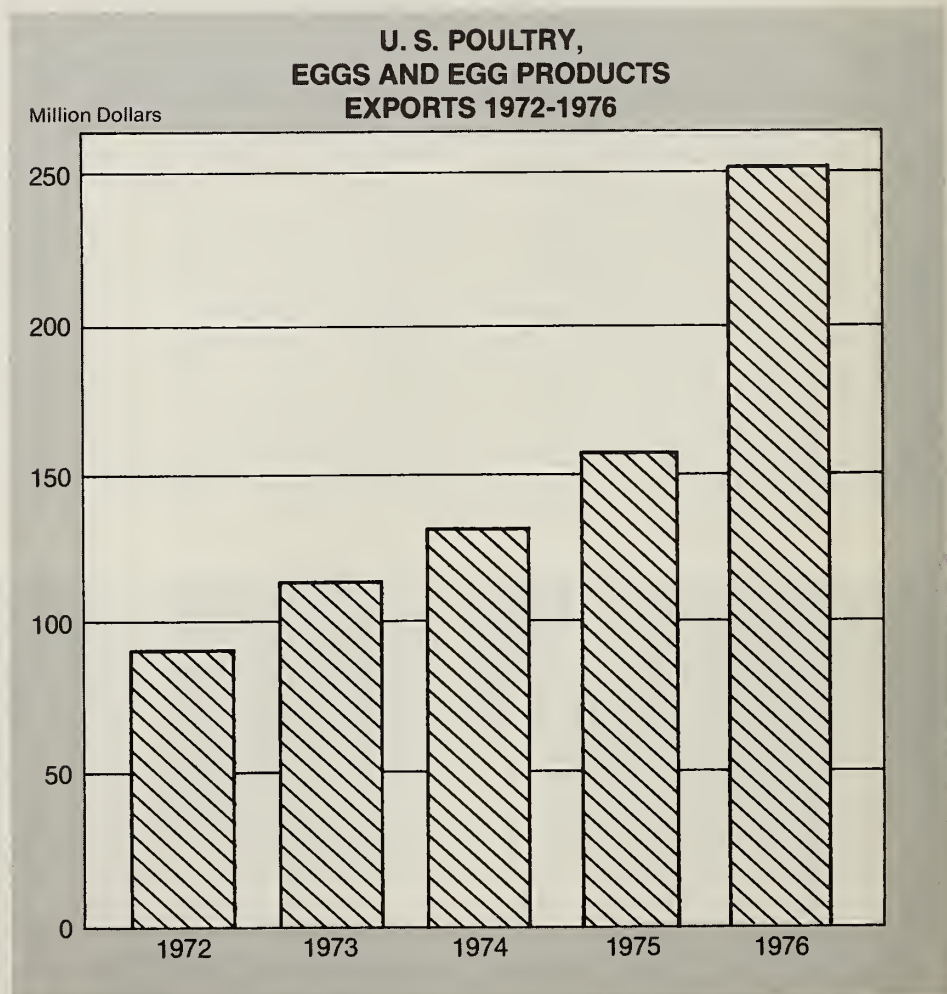
In all, 44 countries imported some type of U.S. egg product. This extensive world market coverage indicates areas exist that could be further devel-

oped for the broad line of U.S. egg products, which can be specifically tailored for innumerable uses in food processing.

U.S. poultry and egg industries do have a world export market. If permitted access—and not faced with subsidized competition—the United States can market its unsubsidized products, to some degree, in practically all countries of the world. If provided access into the markets of all economically viable countries, a conservative estimate of the export value would be at least three to four times the record 1976 value.

A limited look at foreign retail prices for whole broilers, the most widely consumed poultry meat item, provides evidence that the estimated export potential is realistic. Broiler prices in selected foreign cities as of last January 5 were reported by U.S. agricultural attachés to be as follows: Rome, 93 cents per pound; Paris, 95 cents; The Hague, 86 cents; Stockholm, \$1.58; Copenhagen, \$1.03; Canberra, \$1.10; Tokyo, \$1.25; Bonn, 97 cents; Ottawa,

Continued on page 12



Brazil's Soybean Expansion Seen Shifting to New Areas

MOST OF the gain in Brazil's 1977 soybean crop, now estimated to rise 12 percent to 12.6 million metric tons, is expected to occur in the States of Paraná and southern Mato Grosso.¹

However, a shift in soybean expansion is expected as researchers believe southern Mato Grosso will be the major growth area over the next 2-3 years as Brazilian soybean output continues its dramatic rise from only 1.5 million tons in 1970 toward a 1985 goal of 20 million tons. Over this longer term, increased soybean production is expected to move into the cerrados region in central Brazil, larger areas in northern Mato Grosso, the Roraima territory along the Venezuelan border, and sections in northern Brazil.

Presently, Paraná and Rio Grande do Sul account for about 85 percent of Brazil's soybean production. However, researchers said the soybean area in these States will level off with smaller annual production increases coming mainly from higher yields.

In northern Paraná, the soybean expansion reflects the shift, now virtually completed, from coffee to soybeans following the July 1975 freeze. Because of a tractor shortage, uprooting of dead and damaged coffee trees continued into late 1975 and early 1976. In Rio Grande do Sul, soybean area is expected to stay at the current level, and any major soybean expansion will be at the expense of other crops.

In southern Mato Grosso, hundreds of thousands of hectares north of the town of Dourados are in pasture. This area could be converted to soybeans at little cost for land clearing. Also, wheat—double-cropped on more than 60 percent of the soybean area here—provides an extra incentive for soybean expansion.

Obstacles to expanding soybean production are high transportation costs for bringing in fertilizer and other farm requirements, and for moving soybeans to ports for export. Soybeans are trucked 655 miles from Dourados to the port of Paranaguá, about 200 miles

south of Santos. About 10-12 percent of soybean cost is for transportation to ports.

Although Government figures show the average soybean yield in Mato Grosso was 1.7 metric tons per hectare in 1976, yields throughout the State vary widely. Average 1976 yield around Dourados, where 70 percent of the land is in soybeans, was about 2.3-2.4 tons per hectare—and increased yields are expected in 1977. One soybean producer here said he uses the best seed and growing techniques, and applies abundant fertilizer and herbicides on topsoil, 70 feet deep. But in the rather poor cerrado soils to the north, yields are about 50 percent less. In the cerrado area extending about 100 miles south of Campo Grande, rice and pasture dominate the countryside.

The best soybean planting time around Dourados is from November 15 to December 15, but dry November weather delayed planting in 1976. Also producers here said the fertilizer supply was 15-20 percent short of needs.

In western Paraná, between the towns of Foz do Iguaçu and Cascavel, some 75-80 percent of the land is planted to soybeans with the remainder devoted to corn, tobacco, and other crops. Fertilizer shortages have not been a major problem this season in western Paraná. Agricultural cooperative officials said soybean producers near Cascavel plant several varieties of soybeans, with different maturity dates, on the same farm. By stretching out the planting and harvesting periods, soybean producers manage with fewer tractors and combines.

Brazilian agronomists believe that soybean yields in this area could be increased about 6-10 percent above the 2.0-2.2 tons per hectare realized in 1976 if only the best soybean varieties were used. But producers are likely to continue using several varieties in order to hold down their investment in machinery.

In the Cascavel area, some 60-65 percent of the land planted to soybeans is double-cropped with wheat. Soybean yields here are relatively high compared with Brazil's overall average. Double-cropping wheat and soybeans is ex-

pected to continue as long as the Government maintains wheat prices at the favorable level of \$177.50 per metric ton.

As in Mato Grosso, high transportation costs are a major concern of Cascavel soybean growers, who move their soybeans about 400 miles to Paranaguá. These costs are expected to rise to \$17 per ton in 1977, a \$2-per-ton increase above those of 1976.

In northern Paraná, soybeans and corn are the primary crops planted between rows of young coffee trees. Coffee producers have replaced some of the trees that were killed or severely damaged during the July 1975 freeze. Rows of the young coffee trees are planted 3-4 meters apart. As well, on thousands of hectares, soybeans and corn are the main crops planted between rows of coffee trees "stumped down" since the

"... a shift in soybean expansion is expected as researchers believe southern Mato Grosso will be the major growth area over the next 2-3 years as Brazilian soybean output continues its dramatic rise from only 1.5 million tons in 1970..."

1975 frost. Foliage on these trees is now 4-5 feet in diameter, and by late 1977 the foliage will be too large to permit extensive planting of soybeans between rows.

Around the town of Maringá, about 60-65 percent of the land is in soybeans—most of this land was formerly in coffee, pasture, and forest. The shift to soybeans followed the 1975 freeze, but because of a lack of tractors for uprooting coffee trees, plantings for other crops did not start until early 1976—too late for planting the 1976 soybean crop. Land not currently used for soybeans is in corn, coffee, cotton, and other crops.

From Maringá eastward to the city of Londrina, land planted in soybeans gradually decreases while crops of coffee, corn, and cotton increase. Soybean yields in this area—averaging about 1.5-1.6 tons per hectare—are considerably lower than in western Paraná. Also, the amount of land used for double-cropping wheat with soybeans declines to about 30 percent.

¹ Based on a trip to these areas by Leon G. Mears, U.S. Agricultural Attache in Brasilia.

DROUGHT CUTS FRENCH AGRICULTURAL SURPLUS

FRENCH farmers will remember 1976 as a year marked by the most severe drought in France since 1921—and it hit just as the country was recovering during the first half of the year from recession.

Largely as a result of the drought, grain exports declined, the country became a net importer of corn for the first time in 12 years, and vegetable imports rose. These developments in turn caused France's agricultural trade surplus to slip \$40 million to about \$800 million and stand 56 percent below the 1974 surplus.

In response to the drought, Government assistance of about \$1.2 billion and other aid did help boost farm income 9 percent to \$12.4 billion in 1976, although in real terms income per farmer did not gain at all due to a 2.5 percent decrease in the number of farmers and an inflation rate of about 10 percent. This is not encouraging to farmers, who experienced a per capita drop in farm income of about 15 percent in 1974 and another decline of about 1 percent in 1975.

Moreover, the drought's impact on trade was not fully felt in 1976 because of the lag in the relationship of trade to production. The French agricultural trade balance may be adversely affected by the drought until at least mid-1977. Grain exports in the current year are expected to drop about 7.4 million tons, while corn imports are forecast to rise 1.2 million tons. So, the total negative impact of the drought on the grain trade alone may reach to 8.6 million tons valued at about \$1 billion.

Although France has not suffered from a shortage of cereals, the effect of the 1976 grain production shortfall and a relatively poor 1975 crop has been severe. As in the United States, France looks for a positive agricultural trade balance to bail out the petroleum balance-of-payment loss. Despite the agricultural trade surplus, the country's total trade deficit doubled in 1976 to about \$4 billion, and the preliminary current accounts deficit stood at \$6 billion.

During the first 11 months of 1976, France's agricultural exports rose 17.4 percent in value to \$7.6 billion, but agricultural imports increased at a faster rate of 20.9 percent to a total of \$6.8 billion.

While wheat, barley, wine, and spirits exports expanded in 1976, corn exports sagged 15.8 percent because of the poor crop. Beef exports dropped 7.3 percent with the biggest decline occurring in frozen meats, and vegetable exports were down 163,000 tons because of a 220,000-ton dropoff in potato sales.

The rise in imports reflected increases in value of 20 percent for meat and offals; 81.1 percent for coffee, tea, and spices; 48.9 percent for vegetables; and 48 percent for compound feeds. High world prices boosted coffee's import value from \$260 million to \$540 million despite a 3,000-ton decrease in volume to 272,000 tons. The value of vegetable imports climbed \$170 million to \$515 million, representing a rise in volume of 325,000 tons—including 291,000 tons of potatoes.

After peaking at \$492.2 million in calendar 1974, U.S. agricultural exports to France dropped to \$405 million in 1975,

then rose to \$460 million during calendar 1976. Continuing the uptrend, U.S. farm exports to France are forecast to jump to about \$700-\$750 million in the current fiscal year. About three-fourths of the increase will be due to drought-induced purchases of corn and potatoes, both of which are normally major export crops for France. The remainder of the increase will result from the higher volume and prices for soybeans and products and fresh citrus. U.S. grapefruit sales, for instance, should rise from 96,000 tons to 105,000.

French farm exports to the U.S. market should increase from the current level of about \$240 million to \$265-\$285 million as the improving economic climate in the United States ups sales of imported wine, cheeses, and French brands of coffee.

Grains and feed. Total 1976 grain production continued to slide downward to about 32 million tons, 4 million tons less than 1975's and well below the near-optimum level of 41 million tons in 1974.

Total area harvested for grain dropped about 200,000 hectares to 9.5 million in 1976, reflecting a sharp decline in the area of corn harvested for grain. Because of the drought, a substantial area of corn was harvested for ensilage.

Soft wheat production of about 15.6 million tons in 1976, though exceeding 1975's poor crop by 1.4 million tons, was still way below the 19.1 million tons in 1974.

Durum wheat area tumbled 28 percent to 205,000 hectares, while production slipped 35 percent to 531,000 tons in 1976. Barley area included 31 percent winter varieties compared with only 20 percent in 1975—a shift paralleling that of wheat. Barley output declined 1 million tons to 8.3 million tons in 1976.

Corn cultivation was an unmitigated disaster for French farmers in 1976. When seeds germinated, they were greeted by the drought. Even irrigated corn suffered some losses from excessive heat at pollination. Corn area finally harvested for grain—1.4 million hectares—was over 25 percent below the previous year's. And corn production of 5.4 million tons was far off both the 8.2 million tons in 1975, and the earlier expectations of over 9 million tons for 1976.

Total utilization of cereal for feed, including on-farm use, fell about 1 million tons to 15.9 million. The drought seriously reduced normal forage availability, forcing the feeding of straw (that must be fortified) and more compound feeds. Grain utilization for animal feeding may increase in 1976/77 by as much as 2 million tons.

With good planting conditions, ample rainfall, and generally clement winter weather, the 1977 outlook for France's grain crops appears promising. Wheat and barley production could jump 25 percent to over 19 million and 10 million tons, respectively. Although it is not probable that growing conditions for corn could be as poor as in 1976, recovery in production will likely be limited to a maximum of 7.5 million tons.

Livestock, dairy, and poultry. Red meat output rose 4 percent to 2.9 million tons in 1976. The drought upset the anticipated decline of about 2 percent as cattle slaughter steadily increased from late spring until August, when it peaked. During the first 11 months of the year, registered cattle slaughter rose 3 percent to 4.2 million head while that of calves increased 1 percent to almost 3 million head. Cattle herd numbers fell from 23.9 million head to 23.5 million.

Pork and poultry production reached record highs in 1976

of about 1.4 million tons and 865,000 tons, respectively. Lamb and sheepmeat output jumped 13 percent to 131,251 tons during the first 11 months.

The 1976 egg production fell about 2 percent to about 12.9 million tons as imports rose 45 percent and exports plummeted 40 percent.

Despite poor pasture conditions, total 1976 milk production is estimated at 29.8 million tons, 1 percent higher than 1975's. Stocks of nonfat dry milk (NFDM) increased again, standing at an estimated 470,000 tons at year's end.

Following the record 1976 slaughter, a modest drop in beef output is expected as is a small decline in France's favorable beef trade balance.

Because of strong demand, poultry meat production should expand 2-3 percent in 1977 while exports are expected to jump about 5 percent to just over 100,000 tons. Poultry meat imports will remain basically negligible. About a 3 percent increase in pork production is forecast for 1977, but the French deficit in pork will continue largely unchanged.

Egg production will fall about 1 percent in 1977 because of a cost-price squeeze facing the industry. Current projections point toward a 120,000-ton decline in egg exports to a total of 350,000 tons. Egg imports may increase 70,000 tons to 300,000 tons in 1977.

Cow milk production should match the 1 percent gain of 1976. Ultimately, milk outturn levels will depend largely on European Community (EC) decisions to decrease surpluses of dairy products such as NFDM. As the output of dairy products continues its steady uptrend, exports will expand. Exports of cheese, butter, and NFDM may rise about 10 percent in 1977.

Oilseeds and Products. Although the 1976 rapeseed production of 510,000 tons was slightly above the poor outturn of 487,200 tons in 1975, it was still 18 percent below the 1970-74 average of 670,000 tons. Rapeseed plantings, 90 percent of whose total 283,000 hectares were concentrated in winter varieties, escaped the full brunt of the drought. Sunflowerseed production plunged to 60,000 tons, down from 99,500 tons in 1975.

Soybean plantings of about 2,000 hectares were again of little significance. The output of 2,200 tons was disappointing to growers, who suffered the double blow of drought and rains at harvest. The previously announced French goal of a 200,000-ton soybean production by 1980 seems less feasible than ever.

Although 1977 oilseed prospects are not bright, French soybean crushing capacity has nearly doubled, going from 555,000 tons to about 1 million tons, when the Brest-Soja plant started operating in October 1976. Therefore, soybean imports to supply the new plant should increase while meal imports decline. Forecasts project about 700,000 tons of soybean imports and 1.5 million tons of meal in 1977. With Brazilian exports taking part of the market, U.S. sales should amount to 520,000 tons of beans and 750,000 tons of meal.

Tobacco. The 1976 production increased 6 percent to 56,600 tons as most tobacco was grown on irrigated fields and unaffected by the drought. The Ministry of Health introduced a new law that will virtually eliminate advertising of tobacco products after April 1, 1977. Although it is too early to anticipate the law's impact on consumption, the ban will likely freeze market shares of various brands at current levels.

Sugarbeets. For the third straight year, the sugarbeet crop was hard hit as original production estimates of 3.6 million tons were trimmed to 2.7 million tons. But with domestic sugar consumption down again, export availability in 1977 will be about 1.1 million tons.

Cotton. Although cotton mill activity improved in 1976, larger beginning stocks will limit raw cotton imports to 200,000 tons in 1976-77. U.S. cotton exports to France could rise 50 percent over the low level of 6,890 tons a year earlier.

Fruits and vegetables. The 1976 vegetable production was severely hampered by the drought, but the fruit crop was not appreciably affected. The drought-damaged potato outturn fell sharply to 4.6 million tons, which included 3.5 million tons of table stock potatoes. This represented a 36 percent drop under 1975's below-average crop of 7.2 million tons, and a 40 percent decline in table stock potatoes. Although France is normally a net potato exporter, table stock exports have been embargoed since February 1, 1976.

Following a 2-year downturn in fruit production, soaring prices led to an expansion of the 1976 crop. Although table apples output declined about a half-million tons to 1.6 million tons, most other commodities registered increases. They were: Table pears, from 405,000 to 448,000 tons; peaches, from 109,000 to 533,000 tons; cherries, from 92,000 to 123,000 tons; and apricots, from 67,000 to 125,000 tons.

Wine. As in 1975, demonstrations again troubled the wine-producing area in southern France, with the oversupply of French table wine and imports of competing Italian wines fueling the difficulties.

France's total 1976 wine output reached 73 million hectoliters, compared with 65.8 million the previous year. A record production of 82.3 hectoliters was achieved in 1973.

—Based on report by WAYNE W. SHARP
U.S. Agricultural Attaché, Paris

Economic Growth Climbs 5 Percent

France's recovery from the recession got off to a brisk start early in 1976 but leveled off in midyear. Toward the end of the year economic activity picked up again, giving France a real growth rate of almost 5 percent, compared with a decline of over 1 percent in 1975.

Inflation receded to just under 10 percent in 1975 and remained about the same in 1976. To combat inflation, the Government adopted the Barre Plan in late 1976 and a series of measures designed to cut inflation by late 1977 to 6.5 percent, and improve trade and balance-of-payment deficits. Key elements in the Barre Plan are a balanced budget, a temporary price and a real wage freeze, selective tax measures, and a slowing in the growth of the money supply.

As a result of the current wage-slowdown policy, consumer demand may drop from its strong 1976 growth rate of 4.2 percent. Private investment will probably be weaker in 1977. The net effect of these factors, plus the flat inventory accumulation and level Government spending, will likely be a GNP growth rate of 2-3 percent.

Total U.S. exports to France were estimated to reach \$4.7 billion in 1976, while U.S. agricultural exports to France should expand at a faster rate in 1977 because of the increased demand for corn and potatoes following the 1976 drought.

Soviets Plan Expansion Of Grain Storage Capacity

By KEITH SEVERIN

*Foreign Commodity Analysis, Grain and Feed
Foreign Agricultural Service*

A U.S. Government-industry team¹ of grain specialists spent October 4-23, 1976, in the Soviet Union studying the grain storage system there. It was a particularly propitious time for such a study, as:

- A record grain crop was being harvested;*
- State purchases of grain from collective and State farms were exceeding all records;*

- It was the first year of the 10th Five-Year Plan, which, among other things, emphasizes construction of 30 million tons of elevator storage capacity.*

The team's visit—a result of the 1973 U.S.-USSR Agreement on Cooperation in the Field of Agriculture and the first directed specifically at grain storage—was hosted by the USSR Ministry of Procurement. The Ministry is responsible for organizing State purchasing of all domestically produced agricultural products in the Soviet Union, as well as for the actual receipt, storage, processing, and distribution of grains and oilseeds.

The team studied the capacity and location of storage facilities; plans for future construction; the design, building, operation, and management of facilities; drying, cleaning, processing, and handling of grain at the various types of facilities visited; and the technological aspects of storage as they affect the quality and condition of grain.

¹Dr. Yeshajahu Pomeranz, director, Grain Marketing Research Center, Agricultural Research Service, USDA; Richard L. Pennell, manager, Producer Services, North Pacific Grain Growers, Inc.; Robert E. Pacquer, of Marshall, Barr and Pacquer, Inc.; and the author.

THE SOVIET UNION has ambitious construction plans for expanding its total grain storage capacity over the next several years.

The preliminary 10th 5-year-plan (for 1976-80) called for construction of an additional 40 million tons of off-farm grain storage capacity, of which 34 million tons were to have been in upright storage elevators.

The plan stipulated that the bulk of the new facilities were to be constructed in the primary grain-producing republics of the country—the RSFSR (23 million tons), the Ukraine (6.5 million tons), and Kazakhstan (more than 5 million tons).

The plan was subsequently revised, and the new goal calls for an additional 30 million tons of off-farm grain storage capacity, reportedly all in elevators. If achieved, this would be a record amount of upright construction and double the accomplishment of any previous 5-year period.

However, the team observed some flat storage structures under construction at a Ministry of Procurement installation—work that reportedly was being carried out by local enterprise and which presumably could be outside the calculations of the official plan goal.

Total grain storage capacity in the USSR is about 250 million tons. Of this capacity, 100 million tons are on-farm and 140 million tons are off-farm. (The former estimated total is more open to question than the latter.)

On-farm storage on State and collective farms is under the jurisdiction of the Ministry of Agriculture, while off-farm storage is under the Ministry of Procurement.

Of total off-farm storage capacity, about 40 million tons is in upright structures and 100 million is in warehouses or enclosed flat storage buildings, according to the Ministry of Procurement.

Little is known about grain storage

capacity on Soviet State and collective farms and interfarm enterprises. The general impression is that only limited storage capacity is being built on these farms, mainly structures for storing feed and seed.

The Soviet Union's official plan for expansion of off-farm grain storage in 1976 called for completion and operation of 4.8 million tons of additional capacity in 13 Soviet Republics: RSFSR, 2.4 million tons; Ukraine, 986,200, tons; Kazakhstan, 739,400 tons; Byelorussia, 262,200 tons; Uzbekistan, 115,300 tons; Moldavia, 130,300 tons; Latvia, 80,000 tons; Lithuania, 78,800 tons; Estonia, 62,800 tons; Azerbaydzhan, 31,200 tons; Armenia, 23,600 tons; Kirgizia, 11,000 tons; and Georgia, 8,000 tons.

These goals were not met, partly because of shortages of building materials and reinforced concrete during 1976. The final total construction figure published by the Soviets for the year was 4.3 million tons.

Because of the bumper 1976 grain crop, officials believed greater priority should go to emphasizing truck dumping and drying capacity than to increasing storage space, a view with which the team concurred.

The 1976 plan apparently made no provision for expansion of grain storage capacity at Soviet ports.

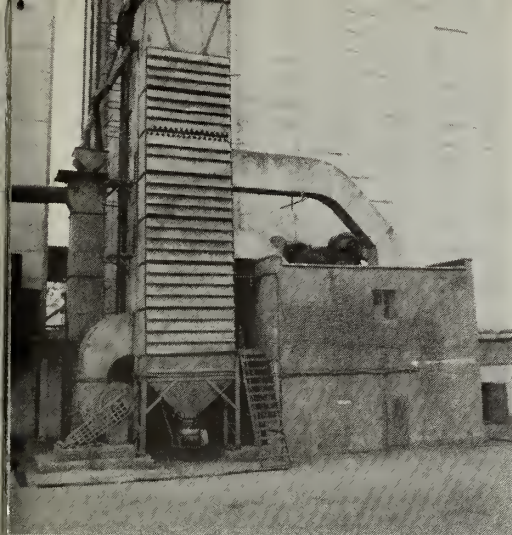
At Odessa, where storage capacity—all in vertical structures—totals 100,000 tons, no new storage facilities were under construction in 1976 and none is planned for 1977.

At Il'ichevsk, the new port on the Black Sea, there are no grain storage facilities, and none is planned. All loading and discharging of grain is handled by clamshell bucket cranes working directly between ships and railway cars.

The same situation is reported to exist at Riga, on the Baltic. (The team's planned visit to Riga was cancelled because of bad weather.)

Reportedly, the storage elevator at the Port of Leningrad has been razed, and there apparently are no plans to rebuild it. The team learned nothing of grain storage facilities—either existing or planned—at the other Black Sea port of Novorossisk.

The current 5-year plan and the accomplishments of 1976 for increasing off-farm grain storage capacity are put into perspective as follows (in million metric tons):



Clockwise from far left: Grain drier at elevator in the central Ukraine; in Krasnodar Kray, an automatic sampler with four probes on endless chains; Side-dumping grain at a Krasnodar mill-elevator kombinat; Zhaltir elevator, in northern Kazakhstan, with round (earlier construction) and rectangular (recent construction) storage bins.



Period or year	Elevators	Warehouses	Total additional capacity
1971-75	16.6	4.1	20.7
1975	4.2	.8	5.1
1976	4.3	0	4.3
1976-80 (plan)	30.0	0	30.0

The annual rate of grain storage capacity constructed during 1961-65 averaged almost 6 million tons; a total of 3.5 million tons was in upright structures. During 1966-70 construction averaged about 7.5 million tons annually, giving a total of 37.5 million tons for the 5-year period. Of the total, 8.7 million tons was in the form of elevators.

Of the 30 million additional tons of storage capacity to be built under the revised 1976-80 plan, the Ministry of Rural Construction is to build 24 million tons; the Ministry of the Construction Industry, 2.5 million tons; the Ministry of Industrial Construction, 1.7 million tons; and other organizations, 1.9 million tons.

The rapid rise in elevator storage capacity during recent years was graphically pointed out at the Exhibition of Achievements of the National Economy, a permanent exhibit in Moscow.

Officials of the Ministry of Procurement have indicated that there is interest in metal storage bins and that there is some grain storage capacity in these

structures.

Such bins are used in regions where grain is turned over quickly and not kept in storage very long. Some metal bins exist in Moldavia, where these conditions prevail.

There are indications that about 2 million tons of metal-bin capacity will be built during 1976-80, but it is not known how much of this construction is considered within the current 5-year plan.

Although no specific information was available on planned construction of storage structures on farms, officials at the Ministry of Agriculture stated that farms will increase their grain storage capacity in relation to planned growth in grain output.

The relationship between construction and output was not defined, but an established Soviet goal is annual grain production equal to 1 ton per capita (total Soviet population on Jan. 1, 1977, was 258 million and grain production in 1976 was 223.8 million tons).

According to officials of the Ministry of Agriculture (in an unclear explanation), farm storage structures are being built with State means; design and construction are carried out by the ministries of agriculture in the various republics, which provide funds and decide

where and when storage facilities are to be built.

Since both the grain growing season and the optimal period for grain harvesting are quite short in the USSR, truck dumps and grain cleaning and drying equipment are important complements to grain storage facilities because they affect the speed at which grain can be received and conditioned prior to storage.

A relative shortage of these items has prompted the Ministry of Procurement to emphasize them in the current 5-year plan. Consequently, an additional 45,000 tons per hour of drying capacity and more than 10,000 large capacity truck unloaders will be built in 1976-80 in conjunction with the scaled-down plan for additional off-farm storage.

Since in a normal year well over half of the grain produced in the USSR must be dried and since grain is trucked as far as 100 kilometers to receiving stations, these additional facilities are of prime importance.

Officials at the Ministry of Procurement indicated that grain receiving points and off-farm storage facilities are located an average 40-45 kilometers from farms.

Team members were told that the capacity of stationary grain driers was

147,000 tons per hour, up from 106,000 tons in 1971.

Of this capacity, gas recirculating driers now account for 49,800 tons per hour and 15,000 tons per hour, respectively. Gas driers appear to be efficient and effective. While a substantial amount of grain is dried mechanically, much is dried on asphalt-surfaced areas.

To facilitate maintaining grain in proper condition prior to storage, active ventilation (aeration) is used extensively. Such processing keeps the temperature of the grain sufficiently low to prevent heating and spoilage prior to drying.

The moisture content of grain that initially is in excess of 18 percent can be reduced by 1-1.5 percent by active ventilation. Officials of the Ministry of Procurement explained that grain is customarily dried down to 14.5-15.5 percent moisture if it is intended for long-term storage (1-4 years).

Soviet officials compute drier capacity on the basis of 4 percent moisture

reduction. However, gas recirculating driers are rated on the basis of 6 percent reduction. This latter factor was used in a presentation of drying capacity in the Ministry of Procurement's exhibit in Moscow. That exhibit indicated that grain drying capacity in the USSR has been increased nearly 2.5 times since 1961.

Soviet grain drying capacity (based on 6 percent reduction in moisture) was expanded dramatically between 1961 and 1975. Total capacity, in million tons per month: 1961, 38.2; 1965, 70.4; 1971, 77.5; 1972, 78.3; 1973, 80.0; 1974, 83.5; 1975, 90.0.

The Moscow exhibit also indicated that the cost of drying wheat in Kazakhstan, using the Tselinnaya Model 30 drier, is the equivalent of about 3 U.S. cents per bushel. This drier consumes about 3.9 kilowatt hours of electricity per ton of grain dried. Presumably, the rated capacity of this drier is 30 tons per hour.

In Kazakhstan, the principal grain

Continued on page 12

USSR Uses Varied Storage Structures

The estimated total 100-million-ton storage capacity on Soviet farms is entirely in flat structures—some of which are warehouses, which also comprise an important part of Soviet off-farm storage. This estimate of on-farm storage is based on a published figure of 98.5 million tons for 1973.

The standard warehouses are 60 meters long, 20 meters wide, and 9 meters high at the center. Capacity of each of these buildings is 3,200 metric tons when grain is piled 3.5 meters deep.

These structures are generally constructed of brick, but in some locations have walls of concrete or timber. Precast concrete roofs predominated in the structures observed by the team, although some were roofed with sheets of asbestos-like material.

It is noteworthy that all grain elevators are under the control of the Ministry of Procurement.

Warehouse floors are of asphaltic concrete. While these standard warehouses appear to be secure for storing grain and reasonably maintaining its quality, considerable labor is required to fill and empty them.

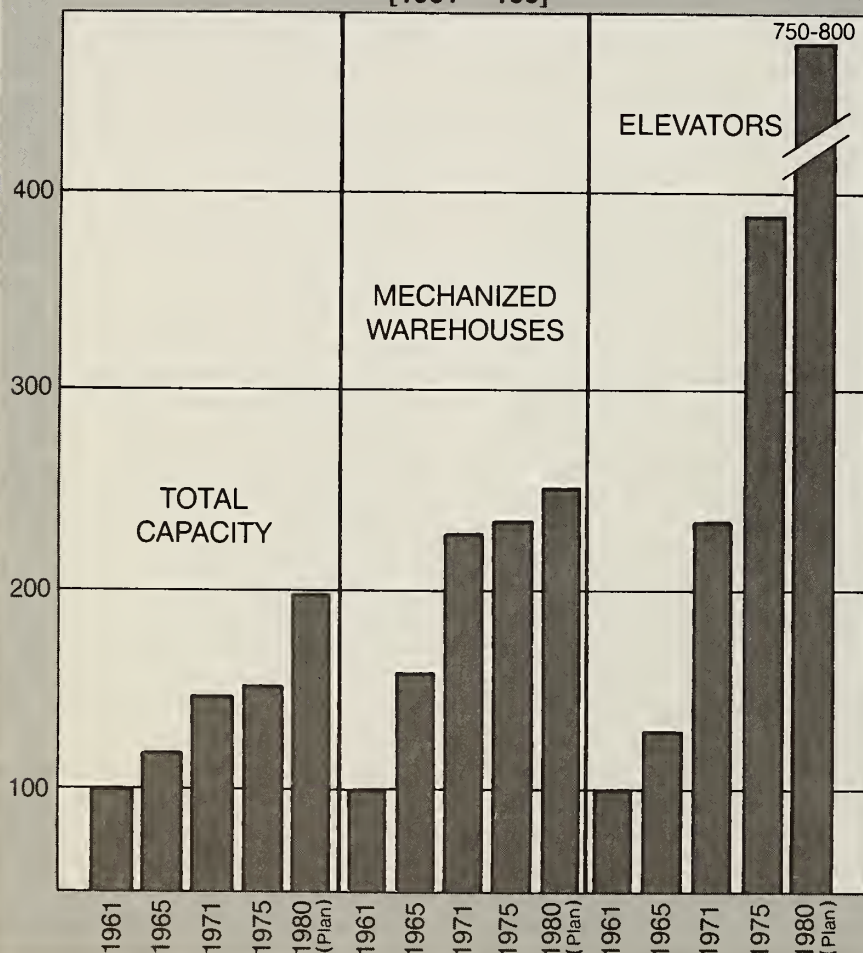
Among grain elevators, precast concrete silos predominate. This type of construction was started about 10 years ago and now comprises about 50 percent of all vertical storage structures.

In Moscow, elevator and mill design officials explained that precast forms are preferred in silo construction because they are faster to erect, are better suited to the cold climate of the USSR, and require less construction labor than the monolith or slipform method.

The team observed two of the many types of precast grain silos that have been erected in the Soviet Union. One of these types is segmented in precast rings, each 6 meters in diameter.

The other type, a standard square bin, predominates and has become the standard for new grain-storage construction. These structures consist of precast pieces, 3 meters square by 1 meter deep, doweled, bolted, and grouted together.

USSR: INCREASES IN OFF-FARM GRAIN STORAGE CAPACITY, 1961-80
[1961 = 100]



Ivory Coast Trying To Match Palm Oil Success With Copra

By WILLIE F. BROOKS, JR.
*Assistant U.S. Agricultural Attaché
Monrovia*

HEARTENED BY THE success of its palm oil program, the Ivory Coast is beginning to expend more of its resources to build up copra production.

The Ivory Coast is now the world's third-ranking producer of palm oil after Malaysia and Indonesia, and now has succeeded in building the value of palm oil output close to that of its other major products, coffee and cocoa. With more attention focused on copra, yields are already jumping remarkably.

The copra oil production scheme was started just 4 years after the oil palm program was launched. Growing methods are based largely on palm oil production techniques evolved by SODEPALM, a major palm oil producer. And largely because of research done at the IRHO station there have been spectacular increases in average copra yields—from 1.5 metric tons per hectare from trees that mature at 11 years to 12.4 tons from trees that mature at 5 years. (IRHO—a research organization—is also heavily involved in the production of palm oil.)

The Ivory Coast's copra production is in its early stages, with the expectation that copra oil will develop into another major foreign exchange earner. Currently there are 50,000 hectares of coconut trees planted by local village farmers and SODEPALM. Current copra production is 13,500-14,500 tons.

The world's major copra oil exporters are the Philippines, Sri Lanka, and Indonesia. But the Ivory Coast plans to substantially increase its copra oil output this year, with the expectation that this rise in production will give the Ivory Coast a definite place among the major copra oil exporters. It also expects to boost to No. 2 its position as an exporter of palm oil.

Prior to the establishment of industrialized palm oil production, timber, coffee, and cocoa constituted 90 percent of the Ivory Coast's raw material exports. In the search for crops that could be processed locally and reduce the need for imported products, the Government decided to emphasize cot-

ton, rice, and palm oil. Output of all three has grown markedly in the ensuing years, with palm oil production outshining the rest, rising to a value level about six times as great as the others.

Increasing steadily over the past several years, palm oil output has jumped from 55,000 tons in 1971 to 165,000 tons in 1975, a 200 percent increase in the 4-year period. The value of Ivory Coast palm oil exports went from US\$2.9 million in 1970 to US\$63.6 million in 1974.

Palm oil output in 1975 was 14 percent greater than the previous year's level, when total palm tree area was 63,000 hectares. Since then, planted area has risen to 74,000 hectares. Now the Caisse de Stabilisation—a quasi-official farm commodity purchasing agency—plans to help farmers boost oil production without increasing area. This is to be done by improving management and harvesting procedures and by planting high-yielding varieties.

Palm oil trees take 3 years to reach fruit-bearing age and 10 years to achieve peak yields. They remain commercially productive for 30-35 years, after which they are replaced. Palm fruit yield per hectare is 18 tons, up from an average yield of 3 tons per hectare in 1965. Oil yield has risen from 9 percent to 22 percent between 1965 and 1975.

There are 12 palm bunch crushing mills in the Ivory Coast. Ten are operated by SODEPALM, which also controls output of 85 percent of the country's plantations. The two remaining plants are run by IRHO and by private operators.

Between 1968 and 1973, SODEPALM, PALMIVOIRE, and PALM-INDUSTRIE, the country's three major processors, opened nine of these palm oil mills east of the Sassandra River. Each mill is capable of processing between 20 and 40 tons of palm bunches hourly. By 1980, plant enlargements—to keep pace with growing palm bunch production—will have brought their total capacity to 380 tons per hour. By



Palm oil tanks at the Ivory Coast processing plant at Blohorn.

then, annual production is expected to be around 236,000 tons of palm oil and 60,000 tons of palm kernels, compared with the current production of 165,000 tons of palm oil and 33,000 tons of palm kernels.

Plantings of so-called outgrowers—local planters who received financial aid from the Government to establish their plantations and get technical assistance from SODEPALM—are situated within a radius of 20 kilometers from the mill, so that their crops can be processed within 24 hours of harvest. These planters are assured of a profitable market for their crops and are eager to increase their incomes by applying the new cultivation methods.

Because the Ivory Coast was a former French colony and has maintained strong ties with France since gaining independent in 1960, the Ivoirians participate in an active trade with France and the European Community. In 1975, France was the Ivory Coast's second most important market for Ivory Coast palm oil, taking 20 percent of total exports of 114,000 tons. Principal market was West Germany, which took 36 percent. Other important markets were the Netherlands (16 percent), the United States (9 percent), and five other countries that took another 9 percent.

Palm kernels are not processed commercially at the present time, but this is scheduled to change in 1977, with the completion of a palm kernel oil mill at Abidjan. Over 95 percent of the Ivory Coast's palm kernels are exported to three major markets—West Germany, the Netherlands, and the United Kingdom.



First Class

Soviet Grain Storage

Continued from page 10

crop is spring wheat, for which State grain standards stipulate a maximum (if penalties are to be avoided) moisture content for procured grain of 17 percent.

Other forms of grain drying equipment are employed for specific operations in certain localities. In the rice producing region of the northern Caucasus, refrigerated air is used to dry the grain. In northern Kazakhstan, ambient air was blown through wheat

piled in flat storage. In southern Ukraine, a jet aircraft engine was observed being used to force warm air under piles of ear corn that was being held until it could be shelled, dried, and put into storage.

U.S. Poultry

Continued from page 4

77 cents; Mexico City, 69 cents; and Brussels, \$1.08. In contrast, the price in Washington, D.C., on the same date was 52 cents per pound.

Assume, for example, the EC opened its markets to U.S. broilers. The EC producers, who have breeding stock, feed conversion, disease control, other production factors comparable to U.S. producers—but needing imported feedstuffs—should be adequately protected by the additional refrigerated shipping and handling costs of moving U.S. broilers to their market. Such producers — utilizing imported feedstuffs — could continue to expand output to meet domestic demand. If domestic production failed to meet the expanding demand resulting from lower retail prices, U.S. broilers would have the opportunity to supply the shortfall.

In the event additional broiler shipments resulted in a drop in U.S. feedstuffs shipments to the EC, the drop in direct exports could be more than compensated by increased movement of U.S. feedstuffs in the form of the processed broilers.

The efficiency of all segments of the U.S. industry, its ability to tailor products to any overseas user's need, its continuing introduction of new products in export (such as chicken hot dogs into Japan in 1976), and its export market's

being made an integral part of marketing by more and more companies are important factors in the record U.S. export of poultry and egg products. These factors combined with the cooperative industry/U.S. Government market development activities—and assuming no change in current world trading conditions—all add up to a continuing and expanding export market.

World Wool Production Down Slightly in 1976

World wool production in 1976 (including the 1976/77 season in the Southern Hemisphere) was estimated at 2,455,000 tons, down slightly from the 2,481,000 tons produced in 1975.

The smaller clips in Australia and the USSR were caused by adverse weather conditions that reduced the number shorn and more than offset the small increases in Argentina, South Africa, and New Zealand. A further decline in sheep numbers on farms occurred during 1976, indicating a smaller clip for 1977.

The upturn in world economic activity during late 1975 and early 1976 led to marked recovery in world trade for raw wool as manufacturers moved back into the market to rebuild their depleted stocks. Also, the change in fashion trends toward the natural look, which featured virgin wool and blended wool manufacturers, increased the demand for raw wool.

Mill usage of the coarser and medium wools increased to such an extent that the accumulated burdensome stocks of prior clips held in the major producer-exporter countries had all but disappeared by mid-1976.

USSR: GRAIN PRODUCTION AND
PROCUREMENT
(in million tons)

Year	Production ¹	Procurement ²
1960	125.5	46.7
1961	130.8	52.1
1962	140.2	56.6
1963	107.5	44.8
1964	152.1	68.3
1965	121.1	36.3
1966	171.2	75.0
1967	147.9	57.2
1968	169.5	69.0
1969	162.4	55.5
1970	186.8	73.3
1971	181.2	64.1
1972	168.2	60.0
1973	222.5	90.5
1974	195.6	73.3
1975	140.0	50.2
1976	223.8	92
1976-80 (plan)	215-220	90
	(average)	
1980 (plan)	235	—

¹ Bunker weight—the weight of the material as it comes from the combine, including excess moisture, clean-out and foreign material, and trash. ² Standard accounting weight—moisture and foreign material not in excess of that prescribed by State grain standards.